

FOOD HABITS OF THE GREAT HORNED OWL (*Bubo virginianus*) IN THE CAPE REGION OF LOWER CALIFORNIA, MEXICO

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On 4 May 1989 we discovered a Great Horned Owl (*Bubo virginianus*) nest with two young. The nest was located on the arms of a Cardon (*Pachycereus pringlei*) at 4.3 m above the ground. Since little is known about Great Horned Owls in Baja California, we studied the food habits of this pair.

STUDY AREA AND METHODS

The nest was in an alluvial prairie (24°08'N 110°26'W) 17 km West of La Paz, Baja California Sur, Mexico, 635 m from the coast line and 6 m above sea level. Vegetation consisted of fleshy stemmed shrubs about 2 m in height with Mesquite (*Prosopis articulata*), Sweet Mangrove (*Maytenus phylantoides*), Torote and Copals (*Bursera* spp.), Adam's tree (*Fouquieria diguetii*), Dagger Cactus (*Machaerocereus gummosus*), Cholla Cactus (*Opuntia* sp.), and Cardons as high as 7 m.

We collected 49 pellets and prey remains from the ground below the nest Cardon (Fig. 1) and eleven other locations in a 50 m radius on 16 and 24 May, and 3 and 9 June. Fledglings left the nest in the first week of June. Skeletal remains were identified using the bird and mammal collection of Centro de Investigaciones Biológicas de Baja California Sur. Invertebrates were identified according to Chu (1949) and Borrer et al. (1981). Identified prey were classified into seven groups, according to their phylogenetic affinities: lagomorphs, rodents, birds, Coast Horned Lizards, ophidia, insects and centipedes, spiders and scorpions.

RESULTS AND DISCUSSION

Mammals (rodents and lagomorphs) formed the bulk of prey consumed (Table 1). Jackrabbits (*Lepus californicus*), Desert Cottontail (*Sylvilagus auduboni*), pocket mice (*Peromyscus* spp.) and Darkling Beetles (Tenebrionidae) were the most frequently consumed prey species. Few rats (*Neotoma lepida* and *Dipodomys merriami*) and White-Footed mice (*Peromyscus eva*) were recorded. Crickets (Grillidae), Horned Beetles (Cerambycidae) and some unidentified coleopterans, comprised the second major group (insects and centipedes). Coast Horned Lizards (*Phrynosoma coronatum*) and ophidia were the most frequent reptiles. Arthropods, such as arachnids (mainly scorpions), chilopods and insects, including Darkling Beetles, were also present. The least frequent prey were birds, spiders and scorpions. Rodents, insects and chilopods were dominant at the nest Cardon; rodents and lagomorphs were dominant at the Cardon occupied by adults as main feeding perches.

The greatest variety of prey in owl pellets was observed at the nest Cardon, followed by a Cardon occupied by

adults as the main feeding perch. Judging from the position where pellets and prey remains were found, adult owls consumed mainly large prey, but weights ranged between 16.5 (pocket mice) and 1703 g (jackrabbits). On the contrary, young owls apparently received mainly small and medium-sized prey, such as Darkling Beetles (0.24 g) and Wood Rats (125 g).

Our results based on a single pair differ from those reported for Great Horned Owls at other Mexican deserts where the greatest proportion of the owls' diets included rodents (42.7%), insects (19.0%) and arachnids (17.2%); Donazar et al. 1989). In our study lagomorphs (24.3%), rodents (22.7%) and insects (16.5%) were the primary prey. Rodents and lagomorphs were abundant in our study



Figure 1. Vegetation showing a Great Horned Owl nest in a Cardon at El Comitán, Baja California Sur, México.

Table 1. Prey ($N = 115$) recorded from 49 pellets of the Great Horned Owl, collected in the locality El Comitán, Baja California Sur, May–June 1989.

PREY	NUMBER OF ITEMS	PERCENT
Mammals		
Lagomorphs		
<i>Lepus californicus</i>	19	16.5
<i>Sylvilagus</i> spp.	7	6.1
Unidentified	2	1.7
Rodents		
<i>Perognathus</i> spp.	13	11.3
<i>Peromyscus eva</i>	1	0.9
<i>Neotoma lepida</i>	4	3.5
<i>Dipodomys merriami</i>	1	0.9
Unidentified	7	6.1
Total	54	47.0
Birds	6	5.2
Reptiles		
Lizards and toads		
<i>Phrynosoma coronatum</i>	6	5.2
<i>Sceloporus</i> sp.	1	0.9
Snakes	8	7.0
Unidentified	3	2.6
Total	18	15.7
Arachnids		
Scorpions	8	7.0
Spiders		
<i>Lycosa</i> sp.	1	0.9
<i>Olios</i> sp.	1	0.9
Total	10	8.7
Centipedes		
Scolopendromorpha	8	7.0
Insects		
Coleoptera		
Cerambycidae	3	2.6
Tenebrionidae	11	9.6
Unidentified	2	1.7
Hymenoptera		
Formicidae	1	0.9
Orthoptera		
Grillidae	2	1.7
Total	19	16.5

region (Arnaud and Acevedo 1990) and hence it is not surprising that the proportion of lagomorphs in the diet of the Great Horned Owls we studied is three times larger than the 6.1% reported by Donázar et al. (1989) for the desert zone of Durango and Sonora, Mexico.

RESUMEN.—Se analizaron 49 egagrópilas arrojadas por una familia de Tecolotes Cornudos (*Bubo virginianus*) en un sitio de la región del Cabo, Baja California Sur, a mediados de 1989. Los tecolotes jóvenes consumieron principalmente roedores, insectos y cienpiés; los adultos comieron, sobre todo, lagomorfos y roedores. Esta dieta, basada principalmente en lagomorfos (24,3%) y roedores (22,7%), difiere mucho de aquella reportada para los tecolotes cornudos de los desiertos de Durango y Sonora, México, donde los lagomorfos solo llegan al 6,1%, y en cambio los roedores alcanzan el 42,7%. Esto puede indicar la gran selectividad de presas que estos tecolotes pueden realizar localmente, favorecidos por la mayor diversidad en la flora del área, respecto a los otros desiertos mexicanos, donde su dieta es más diversa.

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